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Amendments to the Claims

Please cancel Claims 21 and 23. Please amend Claims 12, 14 and 16. Please add new Claims 27. The Claim Listing below will replace all prior versions of the claims in the application:

Claim Listing

Claims 1-5 (canceled)

6. (previously presented) A magnetic field sensor as described in Claim 8, wherein the detectable voltage signal is indicative of the rotation of a rotor.
7. (previously presented) A sensor as described in Claim 6, wherein the rotation of the rotor is indicative of a fluid flow, where the magnetic rotor is located in the flow path of, and is turned by, the flow of the fluid.
8. (currently amended) A magnetic field sensor comprising a magnetostrictive material in contact with a piezoelectric material, and configured such that, when the magnetostrictive material is subjected to an alternating magnetic field, a change in at least one dimension of the magnetostrictive material induces a strain in, and produces a detectable voltage signal in, the piezoelectric material, and wherein during operation the magnetic field sensor does not consume any external electrical power; and wherein the magnetic field sensor comprises a multilayer structure having a single layer of a first one of the magnetostrictive and piezoelectric material, and ~~one or more~~ two layers of the second one of the magnetostrictive and piezoelectric materials positioned so that the single layer of the first material lies between the two layers of the second material.
9. (previously presented) The magnetic field sensor as described in Claim 8, wherein the multilayer structure comprises a single layer of piezoelectric material and two layers magnetostrictive material positioned so that the layer of piezoelectric material lies between the two layers of magnetostrictive material.

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10. (previously presented) The magnetic field sensor as described in Claim 8, wherein the multilayer structure comprises a single layer of magnetostrictive material and two layers of piezoelectric material positioned so that the layer of magnetostrictive material lies between the two layers of piezoelectric material.
11. (previously presented) A magnetic field sensor as described in Claim 8, wherein the detectable voltage signal is indicative of an electrical current in an electrical conductor.
12. (currently amended) A magnetic field sensor as described in Claim 8, additionally comprising a high impedance readout circuit, connected to ~~[[a]]~~ the layer of piezoelectric material, wherein a sensitivity of the sensor is proportional to a thickness of the piezoelectric layer and substantially independent of a surface area of the multilayer structure.
13. (previously presented) A magnetic field sensor as described in Claim 8, wherein the sensor is supported as a cantilever in which one end of the sensor is allowed to strain freely to thereby increase the sensitivity.
14. (currently amended) A magnetic field sensor ~~as described in Claim 8, wherein a~~ comprising a magnetostrictive material in contact with a piezoelectric material, and configured such that, when the magnetostrictive material is subjected to an alternating magnetic field, a change in at least one dimension of the magnetostrictive material induces a strain in, and produces a detectable voltage signal in, the piezoelectric material, and wherein during operation the magnetic field sensor does not consume any external electrical power, the sensor comprising ~~layer of magnetostrictive material comprises a~~ magnetostrictive material ~~substrate and a plurality of piezoelectric stripes on a surface of the substrate.~~
15. (original) A magnetic field sensor as described in Claim 14, wherein the magnetostrictive material is a ferrite.

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16. (currently amended) A magnetic field sensor as described in Claim 14, wherein ~~a layer of~~ the piezoelectric material comprises at least one patterned stripe of electrically insulating piezoelectric material.
17. (original) A magnetic field sensor as described in Claim 16, wherein the magnetostrictive material is a ferrite.
18. (previously presented) A magnetic field sensor as described in Claim 16, wherein the layer of piezoelectric material comprises at least two stripes of piezoelectric material connected electrically in series.
19. (original) A magnetic field sensor as described in Claim 18, wherein the magnetostrictive material is a ferrite.
20. (previously presented) A magnetic field sensor as described in Claim 8, wherein the multilayer structure comprises a read head for reading stored information on a recording medium.

Claims 21-23 (cancelled).

24. (previously presented) A magnetic field sensor as described in claim 8, wherein the magnetostrictive material is a metal alloy.
25. (previously presented) A magnetic field sensor as described in Claim 8, wherein the field sensitivity of the magnetic field sensor is at least 5 mV output signal per Oe of applied magnetic field.
26. (previously presented) A magnetic field sensor as described in Claim 8, wherein the field sensitivity of the magnetic field sensor is at least 10 mV output signal per Oe of applied magnetic field.

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27. (new) A magnetic field sensor as described in Claim 14, wherein the magnetostrictive material is a metal alloy.